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ABSTRACT

Project Reach introduced into twelve elementary schools a series of reading strategies designed to provide intensive reading skills development for referred first through third grade pupils during the 1971-72 school year. Involving diagnosis of reading difficulty and prescriptive teaching, the program aimed at returning the child to his peer group immediately upon mastery of the skill or skills for which he had been referred. Specifically, the objectives were: (1) to customize reading instruction through the use of differentiated learning materials in the classroom, (2) to inform teachers about a variety of reading instruction approaches and provide training in the use of these approaches, (3) to continue development of a resource center which will distribute materials geared to reach individual reading needs, (4) to provide supportive staff in the project schools for consultative service to teachers and individualized services to pupils, and (5) to facilitate support from parents. The results indicate that from 48 to 92% of the pupils achieved marked or very marked improvement in various reading skill areas; 75% of the teachers who participated utilized flexible teaching styles; and two out of three pupils achieved successful reading performance within the classroom. (TO)

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PROJECT REACH

DISADVANTAGED PUPIL PROGRAM FUNDS EVALUATION

1971 - 1972

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PROJECT REACH

INTRODUCTION

A. Needs and Rationale

The challenge for educational communities continues to be that of providing instructional strategies to meet the reading needs of pupils within the schools. The critical identified need appears in the concern for concentrated individualization of instruction for pupils whose learning styles and modalities are unique. Project Reach proposes to combine the best of what has been learned about the teaching of reading with different materials and teaching techniques to assist individual pupils reach a mastery level of diagnosed reading deficiencies in the primary grades.

The project operates within a design which utilizes the services of a reading consultant and supportive teacher in each target school. It serves children who have been identified by their classroom teachers and school principals as evidencing non-functional reading performances due to lack of mastery of appropriate reading skills. It proposes to support pupil and teacher efforts through individual and small unit instruction through periods of treatment adjusted to time required for individual reading skills mastery. The philosophy of the design is predicated upon the belief that every child can become a functional reader.

. Objectives

Generally, this program seeks to improve reading

competencies of disadvantaged pupils identified for service under the program criteria.

Specifically, the process goals for Project Reach include:

1. To customize reading instruction through the use of differentiated learning materials in the classroom.

2. To inform teachers about a variety of reading instruction approaches and provide training in the use of these approaches.

3. To continue development of a resource center which will distribute materials geared to reach individual reading needs.

4. To provide supportive staff in the project schools for consultative service to teachers and individualized instructional services to pupils.

5. To facilitate support from parents.

Product objectives are outlined detailing procedures, criteria and conditions through which attainment of these objectives may be determined.

1. At least 40% of pupils participating in the project will evidence mastery according to the reading skill rating sheet (p.05) after completion of one unit of service in the different reading approach applied to a diagnosed reading problem. A criterion-referenced test will be explored for evaluation of a selected sample.

2. Dissemination of promising practices to participating teachers will result in 50% of project teachers evidencing feeling of greater competency and flexibility in the use of the different reading approaches with appropriate materials as observed through teacher self-report and/or selected observation techniques.

3. Organization and development of specific resources for diagnostic and prescriptive teaching shall be evidenced by:

   a. Increased attention to reading needs of individual pupils observable in the classrooms of 50% of teachers participating in the project.

   b. Greater flexibility in planning as reported by 50% of the teachers.

c. Increased observable competency in utilizing diagnostic and prescriptive teaching for 50% of teaching staff as reported by principals.

4. Involvement of parents in support of their child's reading efforts will be demonstrated to the extent that 70% of parents will have contact with consultants.

B. Historical Background

The 1971-72 school year represents the pilot year of implementation of the program in twelve experimental schools:

1. Anton Grdina
2. Charles Chesnutt
3. Charles Lake
4. Charles Orr
5. Crispus Attucks
6. Doan
7. Forest Hill Parkway
8. George W. Carver
9. Hicks
10. Mount Pleasant
11. Sterling
12. Woodland-Observation

Funding for the program was provided through Disadvantaged Pupil Program Funds which provided allocations to school systems enrolling high concentrations of children from families receiving Aid to Dependent Children for development of programs related to demonstrated educational and cultural needs of these pupil groups.

Delays in fully implementing the program were experienced due to critical staff shortages and late deliveries of materials. As staff became available, the project moved forward with full implementation in March, 1972.

C. Summary of Operations

This evaluation focuses on operations during the 1971-72 school year. According to the June 1972 census, the project had rendered:

- individualized services to 1007 pupils in the primary grades
- in-class group services to 1922 pupils in six schools using the Sullivan approach as the core reading approach.

Project Reach reportedly served a total of 2929 pupils during the 1971-1972 school year. Appendix I summarizes enrollments for project school operations. Project mobility rates were 25% in the pilot year. Project records indicated that 728 pupils transferred or withdrew during the year.

Project costs amounted to a total of $390,340.00 which represented a per pupil expenditure of $133.27.

D. Questions To Be Answered By Evaluation

1. What kinds of materials and methods proved effective with reading disabled pupils in classrooms where pupils reflect wide ranges of potential?

2. Which children benefit most from the different techniques and materials?

3. What specific kinds of reading disabilities do they serve?

4. Which strategies are most helpful in adapting teaching styles to accommodate variant learning problems based upon subjective judgement?

II. HIGHLIGHTS OF FINDINGS

A. Summary of Key Findings

Project Reach introduced into 12 elementary schools a series of reading strategies designed to provide intensive reading skills development for referred pupils as often as needed during the school year. This program involved diagnosis of reading difficulty and prescriptive teaching. Its goal was to return the child to his peer group immediately upon mastery of the skill or skills for which he had been referred.

Specific results appear to indicate:

- Project Reach services in the form of intensive reading skill development were extended to 2929 pupils in the 12 Project Reach schools. Of this number 2201 remanined in their home schools throughout the project year, a loss of 728 pupils through transfer or withdrawal.

- mastery of reading skill deficiencies was exhibited to the extent that teachers adjudged the improvement in functional use of developed pupil reading skills from "marked" to "very marked" as illustrated:

Grade	Sample Number	Skill Area	% of Pupils Achieving Mastery
1	38	Phonetic Analysis	58%
		Consonants	82%
		Basic Sight Words	53%
		Comprehension	87%
2	56	Phonetic Analysis	71%
		Consonants	88%
		Basic Sight Words	48%
		Comprehension	64%
3	52	Phonetic Analysis	77%
		Consonants	92%
		Basic Sight Words	52%
		Comprehension	69%

- greater individualization of reading instruction development processes for pupils whose primary reading deficiencies required intensive treatment and different materials.

- sensitization of teachers to developmental reading instruction based upon diagnostic and prescriptive teaching.

B. Implications and Recommendations

Evaluation findings suggest:

- continuance of the services of Project Reach to pupils in grades one through three in the 12 schools should be maintained

- substantiation of inferred mastery of reading skill deficiencies through the use of criterion-referenced testing would be desirable

- utilization of flexible teaching styles by 75% of those teachers in project schools who participated as reported by their principals which exceeded the expected objective of 50 per cent

- successful reading performance with peer groups within the classroom for two out of three pupils as judged by their teachers who assigned a satisfactory mark (S) as evidence of functional reading.

III. PROJECT DESCRIPTION

A. Participant Characteristics

Many Cleveland Public Schools face problems which accompany highly mobile families whose very existence is threatened by economic insecurities. The average mobility rate for the 12 project schools was 71.9%. Specific mobility rates* for the project schools were:

. Anton Grdina	77%
. Charles Chesnutt	27%
. Charles Lake	82%
. Charles Orr	98%
. Crispus Attucks	108%
. Doan	64%
. Forest Hill Parkway	46%
. George W. Carver	44%
. Hicks	96%
. Mount Pleasant	80%
. Sterling	70%
. Woodland-Observation	71%

Project schools enroll large concentrations of children from families receiving Aid to Dependent Children assistance. To qualify for Title I programs, schools must reflect a rate exceeding the city-wide average of 30 per cent. Reports from the Cuyahoga Welfare Division indicate that the enrollment rates for the project schools range from 43 to 97 per cent. Specific school rates include:

. Anton Grdina	58%
. Charles Chesnutt	97%
. Charles Lake	70%
. Charles Orr	82%
. Crispus Attucks	97%
. Doan	78%
. Forest Hills Parkway	43%
. George W. Carver	88%
. Hicks	61%
. Mount Pleasant	53%
. Sterling	97%
. Woodland-Observation	57%

*Based on 1970-71 census data.

Reading performance in these schools has been generally below the grade norms as established by standardized reading tests used in the city-wide testing program. Grade average scores taken from the Comprehensive Test of Basic Skills at third grade level administered in April, 1972, revealed the following levels of performance, as presented in Chart I.

Data from the Kuhlmann-Anderson Test series for grades two and six indicated that the experimental schools were below the average of 100.0 which is the national norm for this test series. Average P.L.R. scores at each grade level included:

Grade Level	Average	Norms
2	95.08	100.0
6	85.92	100.0

B. Project Operations

Project Reach provided a consultant, supportive teacher and instructional assistant for each school.

Teachers referred pupils to the assigned building consultant for service. The referred pupil's specific reading skills were identified at the time of teacher referral. Consultants and supportive teachers administered available diagnostic reading tests to assess the degree of severity of deficiency. Consultants initiated the prescriptive teaching technique augmented with selected appropriate materials. Supportive teachers, instructional aides and, in some schools, volunteers supported the efforts of the pupil under the guidance and direction of the consultant. Treatment was continued until such time

CHART I

Levels of Performance
Comprehensive Test of Basic Skills
Reading Subtest
April 1972--Grade 3

School	Vocabulary Performance Levels			Comprehension Performance Levels		
	Above Ave. %	Ave. %	Below Ave. %	Above Ave. %	Ave. %	Below Ave. %
Anton Grdina	34.8	47.2	18.0	20.2	68.6	11.2
Charles Chesnutt	8.1	70.3	21.6	9.5	74.3	16.2
Charles Lake	11.8	68.9	19.3	15.1	67.2	17.7
Charles Orr	13.1	63.2	23.7	13.1	71.1	15.8
Crispus Attucks	9.4	67.9	22.6	5.7	84.9	9.4
Doan	35.3	47.1	17.6	26.5	66.2	7.3
Forest Hills Parkway	26.3	61.1	12.6	20.0	71.6	8.4
George W. Carver	11.8	64.5	23.7	8.6	77.4	14.0
Hicks	25.0	68.8	6.2	14.6	79.2	6.2
Mount Pleasant	20.5	61.7	17.8	24.7	68.5	6.8
Sterling	17.1	68.3	14.6	17.1	80.5	2.4
Woodland-Observation	2.5	68.4	29.1	8.9	70.9	20.2

as the child demonstrated mastery of the skills for which he was referred. Pupils could be referred as often as teachers observed either new deficiencies or recurring weaknesses in the previously treated reading skills.

Teacher consultants provided coordination among the teaching staff in the project schools. They functioned as in-service consultants in their schools. In-service programs emphasized the skills of proper diagnosis of need, supportive techniques for the child within the peer group, adjusting materials to pupil reading level and encouragement for pupil efforts at the reading task.

In six of the project schools the Sullivan Reading Program was the core reading approach. Teacher consultants and supportive staff rendered service to groups within the classrooms in addition to the intensive treatment strategy for individual pupils.

In interpreting results observed for this program it should be recognized that individualized treatment involves a wide range of techniques and procedures. Specific standardization of diagnostic processes and post mastery assessment are needed before measurement of program impact upon pupil progress can be considered as valid.

. In-Service

Orientation to the project began in early September, 1971 with the principals of the twelve selected schools. At this meeting the Project Reach rationale, plan of operation and evaluation design were presented. Orientation to available staff was initiated prior to the meeting of principals. Following these meetings, individual principals aided by consultants assigned to their schools began in-school orientation meetings with teachers of primary grades from whose classes pupil participants would be identified and referred. The project had proposed co-school staff in-service for schools with similar reading problems. This procedure would continue applicable throughout the year. The Division of Research was requested to design the Project Reach Pupil Record Card.

In March, 1972, Project Reach began full implementation with full staff complement. A cooperative planning meeting was attended by project administrators, school principals, consultant and supportive teaching staff. Workshops were tentatively set up for March, April and May. Suggested topics were:

- identification of reading difficulties
- reading lesson preparation
- reactor sessions.

The Division of Research and Development presented information pertinent to evaluation and the pupil card designed at the request of the project.

Project records reflected four subsequent workshops involving primary teachers of participating schools. Subjects of these workshops were:

1. Recognition of Individual Difficulties in Primary Reading
   March, April, 1972

2. Reading Lesson Preparation and Presentation
   April, May, 1972

3. Basic Principles of Behavioral Objectives
   May 15, 22, 25, 31, 1972

. Staffing

The project operated under the direction of the Educational Program Manager of the Reading Instruction Program. An assistant project manager was added to serve as liaison, facilitate the implementation of the program in the schools and provide purposeful in-service to project staff. Other staff included 12 teacher-consultants, nine supportive teachers and eight instructional assistants.

. Parent Involvement

Parent meetings were held at all schools to assist parents in understanding their children's reading problems and to enlist their support. It had been proposed at the initial planning meeting that Project Reach Parent Task Forces be established at each school under the direction of principals. Formal structuring of this group was delayed. Parent involvement remained as part of each school's advisory committee.

IV. EVALUATION

A. Basic Design

The evaluation of this project in its pilot stage was limited to data collection and analysis to provide a comprehensive assessment of key questions. The One-Shot Case Study was used as it appeared appropriate to the nature and intent of this program. Inferences were based upon general expectations of what the data would have been had the treatment not occurred. Data collected for evaluation included:

- diagnostic information from individual pupil reading checklists representing specific reading skill deficiencies
- city-wide achievement test scores
- pupil progress rating scale
- principal opinionnaires
- baseline data reflecting ages and scholastic aptitudes of pupils served
- study of variant materials used in the reading skills acquisition process in relation to diagnosed reading need
- teacher ratings of pupil mastery of reading skills
- attendance information

Assignment of schools to the program was made on administrative assignment to twelve Title I elementary schools: Anton Grdina, Charles Chesnutt, Charles Orr, Charles Lake, Crispus Attucks, Doan, Forest Hill Parkway, George Washington Carver, Hicks, Mount Pleasant, Sterling and Woodland-Observation. Six of these schools had been previously Project Read schools utilizing the Sullivan reading approach. The six schools were:

Anton Grdina

Charles Chesnutt

Crispus Attucks

Forest Hill Parkway

Hicks

Mount Pleasant

The remaining six schools were designated as those which would support the core basal program with exploration of different techniques of reading development for identified pupils. Selection of controls for the program was not effected as the project did not begin full operation until the latter part of the school year. In this short period of operation, any attempt at comparative analysis would have yielded depressed results.

Pupils who received individualized instruction were randomly selected from the primary classrooms of the twelve schools. The analysis concerned itself with identification of categories of reading skill needs and the types of materials demonstrated effective for improvement. In addition, the evaluation sought an assessment of project impact upon individual pupil progress through teacher ratings. The opinions of principals in whose schools the project operated were solicited as an assessment of the effectiveness of the Project Reach strategies based upon subjective thinking.

The evaluation also examined the city-wide test scores of pupils at third grade level in twelve project schools and a comparable number of non-project Title I schools. Scores from the 1969, 1970 and 1972 city-wide testing program were observed as baseline data for a longitudinal study which will attempt to plot the per cent of pupils who fall into the first quartile resulting from their achieved scores from the city-wide standardized testing program. The evaluation chart on the following pages outlines the evaluation procedures which were to have been followed. In the initial year, the evaluation design was explored to the extent that limited operation would permit. At this evaluation its pertinency can only be considered directional.

The project served a total of 2,929 pupils in the primary grades of twelve selected public schools. Of this total 1,007 pupils were referred and received treatment for specific reading needs. A random sample of 200 pupils in grades one, two, and three was selected for the pilot evaluation sample. This number was reduced to 146 with the loss of 54 cases from the sample. The generality of reported information in these reports rendered them inappropriate for evaluation purposes. The evaluation sample population shown in Table I included a limited random selection of pupils who received the intensive treatment services and all pupils in the third grades of schools using the Sullivan reading approach.

CHART II
PLAN FOR EVALUATION
PROJECT REACH

Objective	Data Collection	Data Analysis	Criterion
1. Children from selected classes in participating schools, grades one to three will show higher reading scores during the 1971-1972 school year compared to 1970-1971. Two criterion will be considered indicative of mastery of the objective.	Posttest scores of participants on the Metropolitan I Primary Achievement Tests will be compared with scores from standardized reading tests and pupils reading records for 1970-1971 and/or city-wide CTBS Test administered at grade 3.	Design I X 0 0 or Design II (R) 0 x 0 (R) 0 0 or Design III (R) x 0 (R) 0 T-test for significance of change or analysis of covariance	At least 40% of pupils will show significant growth in reading ($p. < .05$) after one full year participation in the program.
2. Teachers will show greater competency and flexibility in the use of variant reading approaches utilizing differentiated learning materials.	Teacher Self-Evaluation Instrument, Pre-Post (Locally constructed)	Wilcoxon Signed-Matched Pairs Mann Whitney (if controls are available).	Post responses of 50% of teachers will reflect positive changes in attitudes about reading instruction in their classrooms

3. Teachers will become more knowledgeable in the use of diagnostic and prescriptive teaching with better organization in the use of variant resources	Principals' Rating of Project Effectiveness in Mastering Teacher Objective	Descriptive	Greater attention to reading needs of individual pupils will be observable for 50% of the teachers participating in the program
4. To facilitate support of parents	Opinions of parents Attendance data from Resource Center Project Data	Descriptive Descriptive Descriptive	Active involvement of 70% of parents with teachers and consultants.

TABLE I

Evaluation Sample Population
Project Reach
Grades One, Two and Three
1971-1972

Design	Group	Grades 1	2	3	Total
Intensive Individualized Treatment	Experimental	38	56	52	146
Whole Class and Group Support	Experimental			890	890
	Control			878	878
Total		38	56	1,820	1,914

The California Test of Basic Skills was administered at third grade level as part of city wide testing. Project Reach schools and their control schools were included in this testing. Standardized achievement tests were administered at the first and second grade level because of the limited span of full project implementation. Extrapolated scores from the Metropolitan Reading Readiness test were used as baseline data for first grade pupils. In lieu of achievement test results step placement beyond step one of the grade level became an indicator of post progress for pupils in grades one and two.

The evaluation utilized the California Test of Basic Skills test data for third grades from the 1969-1970 school year to initiate a directional study of average grade placement for

those third graders in the first quartile. This study will continue as part of a longitudinal study for the duration of the project.

B. Presentation of Findings

The data was analyzed to answer questions pertinent to the operation of the project during the 1971-72 school year.

1. What kinds of materials and methods proved effective with reading disabled pupils in classrooms where pupils reflect wide ranges of potential?

2. Which children benefit most from the different techniques and materials?

3. What specific kinds of reading disabilities do they serve?

4. Which strategies are more helpful in adapting teaching styles to accommodate variant learning problems based upon subjective judgement?

The first question of concern was:

What kinds of materials and methods prove effective with reading disabled pupils in classrooms where pupils reflect wide ranges of potential?

Information from project pupil records revealed that treatment methods included individualized and small group instruction utilizing the reading instruction expertise of the consultant, supportive teacher and instructional aide. The techniques and methods included the use of teacher-made as well as screened commercial materials, audio-visual techniques, and teaching machines, books and other related reading materials, games and devices determined successful in reading skill development. Tutors and volunteers augmented the instructional effeorts of the teaching teams. All instructional

techniques and materials were used in total or in part based upon pupil need, learning modality and pupil progress. Chart III illustrates the scope of reading deficiencies diagnosed, materials and techniques used in the reading development process.

The second question was:

Which children benefitted most from techniques and materials?

Teacher referrals of pupils for project services appeared to generate a general identity pattern of pupils who needed project services. It may be interpreted that pupils referred for service reflected:

- median ages from six months to one year above ages considered appropriate for grade level
- wide-ranged scholastic aptitude yielding a median within the low average to average range
- broad-spectrumed reading disabilities.

Table II illustrates median intelligence scores based upon the scores from the Kuhlmann Anderson Intelligence tests administered at grade two during the 1971-72 school years to second graders. Scores from the Metropolitan Readiness test administered at the end of kindergarten provided baseline information for pupils at first grade level. The table presents findings for the evaluation sample.

CHART III (con't)

Diagnosed Reading Deficiencies, Materials and Techniques
Grades One, Two and Three

Project Reach
1971-1972

Grade	Sample N 38 Reading Skill Deficiency	Sample	Materials	Techniques
I	Alphabet	34%	Charts	Auditory
	Vowels (all)	15%	Teacher-made devices	Visual
	Long Vowel Sounds	18%		
	Short Vowel Sounds	44%	Books	Auditory-Visual
	Consonants, (Initial, Media, Final)	84%	Kits	Kinesthetic
			Puzzles	Perceptual-Motor
	Blends	36%	Games	Tactile
	Special Blends	23%	Transparencies	Drill
				Structured
	Sight Words	42%	Filmstrips	Guided-exploratory
				Self-exploratory
	Prefixes	10%	Teaching Machines	Application
	Suffixes	10%	Records	Reproduction - Oral and written
	Endings	42%	Filmstrips	Creative Writing
	Compound Words	21%	Alphabet Cards	Language Experience Approach
	Line Skipping	10%	Tape Recorder	Oral Reading

CHART III (con't)

Diagnosed Reading Deficiencies, Materials and Techniques
Grades One, Two and Three

Project Reach
1971-1972

Grade	Sample N 38	Reading Skill Deficiency	Sample	Materials	Techniques
I		Omissions	15%	Worksheets	Silent Reading
		Substitutions	0%	Pictures	Comprehension Skills
		Insertions/Reversals	13%	Active Games	Interpretatory Skills
		Eye, Lip Movement	18%	Beaded Alphabet	Role Playing
		Finger Pointing	21%	Nursery Rhymes	Dramatization
		Reading Rate	5%	Programmed Materials	Testing
		Word Sense	39%	Phonics Charts	Diagnostic Self-Progress Checks
		Phrase Sense	31%	Practice Booklets	Mastery Assessment
		Sentence Sense	39%	Magazines	
		Sequence	10%	Sound-Symbol Cards	
		Main Idea	18%	Multi-media	
		Literal Meaning	13%	Sight Words	
		Inferential Meaning	7%	Basal Text	

CHART III (con't)

Diagnosed Reading Deficiencies, Materials and Techniques
Grades One, Two and Three

Project Reach
1971-1972

Grade	Sample N 56	Reading Skill Deficiency	Sample	Materials	Techniques
II		Alphabet	23%	Phonic Cards	Auditory
		Vowels (all)	34%	Programmed Materials	Visual
		Long Vowel Sounds	61%%		
		Short Vowel Sounds	71%	Phonic Sheets	Auditory-Visual
		Letter Teams	32%		
		Vowel Combinations	36%	Magazines	Kinesthetic
		Consonants, (Initial, Media Final)	79%	Games	Tactile
				Charts (Teacher-made and Commercial)	Drills, Structured Guided-Exploratory Self-Exploratory
		Blends	73%		
		Special Blends	48%	Basic Sight Words	Application
		Sight Words	63%	Supplementary	Creat ve Writing
		Prefixes	25%	Books	Language
		Suffixes	21%	Vocabulary Cards	Experience Approach
		Endings	55%	Touch and Learn Alphabet	Oral Reading
		Compound Words	36%	Records, Tapes	Silent Reading
		Line Skipping	13%	Tape Recorder	Rate Pacing

CHART III (con't)

Diagnosed Reading Deficiencies, Materials and Techniques
Grades One, Two and Three

Project Reach
1971-1972

Grade	Sample N 56	Reading Skill Deficiency	Sample	Materials	Techniques
II		Omissions, Substitutions	16%	Transparencies	Comprehension Skills
		Insertions, Reversals	9%	Filmstrips	Role Playing
		Eye, Lip Movement	14%	Tachistoscope	Dramatization
		Finger Pointing	16%	Audio Flashreader	Testing
		Reading Rate	18%	Felt and Beaded Alphabet	Diagnostic
		Word Sense	38%	Flashcards	Self-Progress Checks
		Phrase Sense	34%	Worksheets	Mastery Assessment
		Sentence Sense	45%	Chalkboard	
		Sequence	14%		
		Main Idea	50%		
		Literal Meaning	21%		
		Inferential Meaning	21%		

CHART III (con't)

Diagnosed Reading Deficiencies, Materials and Techniques
Grades One, Two and Three

Project Reach
1971-1972

Grade	Sample N 56	Reading Skill Deficiency	Sample	Materials	Techniques
II		Seeing Relationship	5%		
		Drawing Conclusion	20%		
		Fluency	45%		
		Expression	34%		

CHART III (con't)

Diagnosed Reading Deficiencies, Materials and Techniques
Grades One, Two and Three

Project Reach
1971-1972

Grade	Sample N 52	Reading Skill Deficiency	Sample	Materials	Techniques
III		Alphabet		Active Games	Auditory
		Vowels (all)	10%	Picture Flashcards	Visual
		Long Vowels Sounds	67%		
		Short Vowel Sounds	71%	Nursery Rhymes	Auditory-Visual
		Letter Teams	46%		
		Vowel Combinations	56%	Programmed	Kinesthetic
		Consonants, (Initial, Medial Final)	46%	Materials	Tactile
				Teacher-Made Games and Devices	Sound-Symbol Relationship
		Blends	60%		Drill
				Worksheets	Structured
		Special Blends	40%		Guided-exploratory
				Chalkboard	Self-exploratory
		Sight Words	58%		
				Phonics Workbooks	Application
		Prefixes	42%		
				Transparencies	Creative Writing
		Suffixes	42%		
				Supplementary Books	Language Experience Approach
		Endings	54%		
				Teacher-Made Alphabet	
		Compound Words	42%		Oral Reading
				Beaded Alphabet	
		Line Skipping	6%		Silent Reading

CHART III (con't)

Diagnosed Reading Deficiencies, Materials and Techniques
Grades One, Two and Three

Project Reach
1971-1972

Grade	Sample N 52	Reading Skill Deficiency	Sample	Materials	Techniques
III		Omissions, Substitutions	21%	Phonics Worksheet	Rate Pacing
		Insertions/Reversals	6%	Selected Paragraphs from miscellaneous	Comprehension Skills
		Eye, Lip Movement	8%	Books	Role Playing
		Finger Pointing	12%	Phonics Charts	Dramatization
		Rate of Reading	12%	Alphabet Cards	Testing Diagnostic Self-Progress Checks
		Word Sense	60%	Practice Booklets	
		Phrase Sense	60%	Tape Recorder	Mastery Assessment
		Sentence Sense	71%	Magazines	
		Sequence	46%	Mirror	
		Main Idea	63%	Skill Cards	
		Literal Meaning	29%	Audio-Flashreader	
		Inferential Meaning	35%		

CHART III (con't)

Diagnosed Reading Deficiencies, Materials and Techniques
Grades One, Two and Three

Project Reach
1971-1972

Grade	Sample N 52	Reading Skill Deficiency	Sample	Materials	Techniques
III		Seeing Relationships	27%	Filmstrips	
		Drawing Conclusions	48%	Sound Records	
		Fluency	31%	Paperback Librarics	
		Expression	19%	Crossword Puzzles	
				Webstermasters	
				Phrase Cards	
				Sentence Strips	
				Storybooks	
				Supplementary Books	
				Skill Cards	
				Library Books	
				Dictionary	
				Sight Words	
				Basal Text	

TABLE II

Scholastic Aptitude Results
Baseline Data

Metropolitan Readiness Tests
Form A - 1971

Kuhlmann Anderson Test
Form B and CD - 1971

Grade	Test	Range	Median
1	Metropolitan Readiness Test	D-C	Below C (2.6)
1	Kuhlmann Anderson	75-99	87.00
2	Kuhlmann Anderson	65-134	93.50
3	Kuhlmann Anderson	65-119	85.63

It may be interpreted that pupils referred were generally within the low average to average range of intelligence. A history of low reading performance levels placed these pupils in need of different strategies of reading skills development as judged by their teachers.

It was evident from the school record of these pupils that a history of slow progress through the primary grades was evolving. Median ages at grade level revealed that within the sample pupils were from six months to one year above age for grade. These findings may be observed in Table III.

TABLE III

Median Age by Grade Level
Evaluation Sample
1971 - 1972

Grade	N	Range of Ages	Median Age
1	38	5-10 to 9-6	6.6
2	58	6-8 to 9-6	8-0
3	49	7-11 to 10-9	8-11

Treatment periods for pupils who received the intensive treatment services of project staff ranged from five to 179 days. It was determined from project pupil records that length of service period varied from pupil to pupil for reading deficiencies within the same category.*

The third question of concern was:

What specific kinds of reading disabilities did they serve?

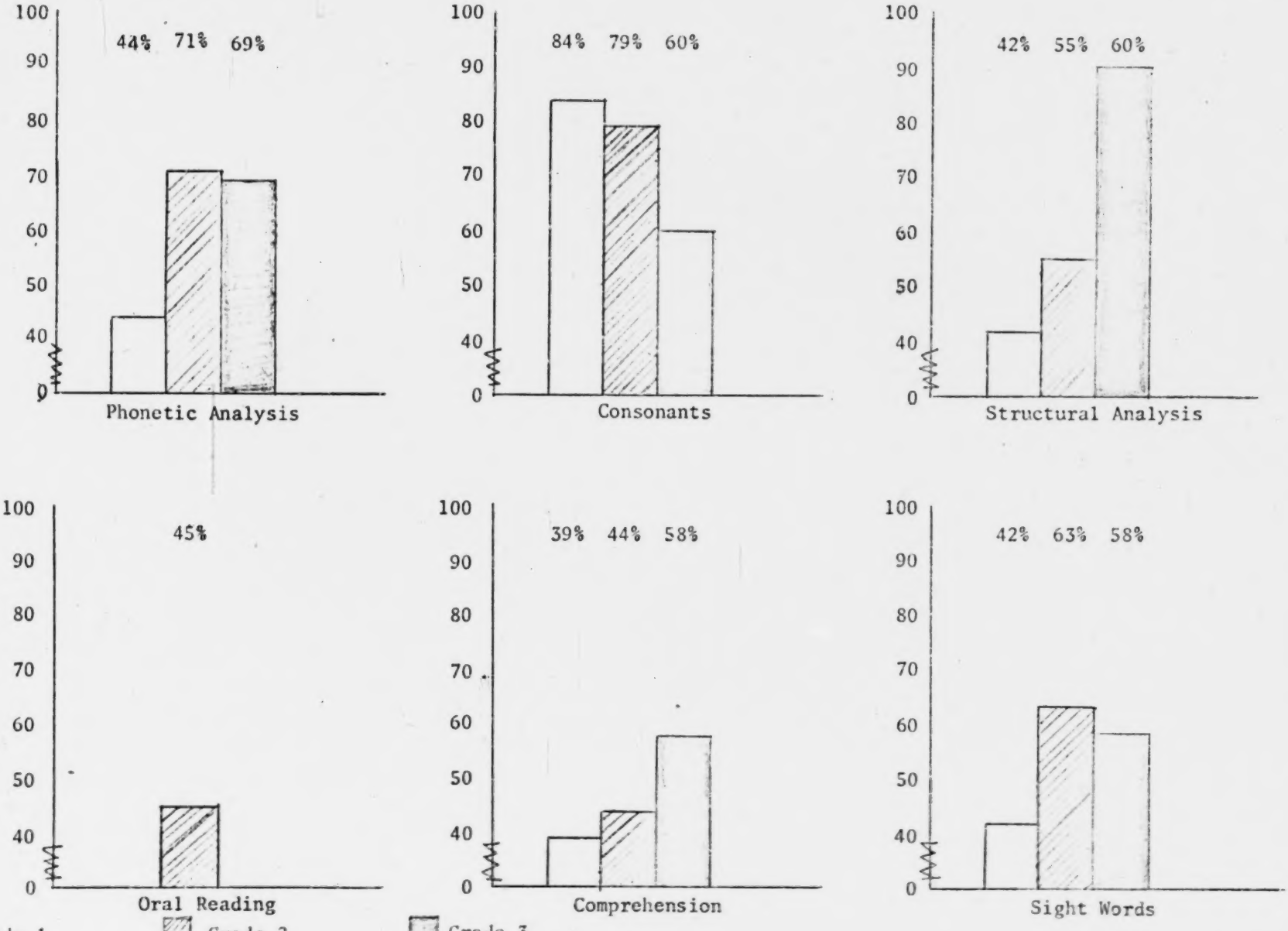
The greatest identified reading needs of pupils served are graphically presented in Chart IV. Specific reading needs are summarized in clusters. Specific reading deficiencies within the clusters are shown in Chart III. Included in Chart IV are only those clusters in which the greatest identified reading deficiencies occurred (40% and above).

The project utilized the first year in exploring and developing strategies, orientation to materials used to meet individual pupil needs, service to pupils, orientation to schools and staff development. It was not considered feasible

*Refer to Chart III

CHART IV

Identified Reading Deficiency Clusters
Grades One, Two and Three
1971 - 1972



to attempt to draw conclusions as to the specifics of techniques applicable to specific reading deficiencies without sufficient exploration. The fourth question will remain open for further project consideration. The question was:

> Which strategies are more helpful in adapting teaching styles to accommodate variant learning problems based upon subjective judgement?

Of interest to the evaluation process were the standings of third graders within the first quartile in schools identified for project services and Title I schools outside the project. A sample of Title I schools were selected in which mobility rates and poverty indices was comparable to the twelve Project Reach schools. Third graders in the 12 selected Title I schools will serve as controls in the quartile one third grade status study. Information has been drawn from test scores of third graders beginning with the 1969 administration of the Comprehensive Test of Basic Skills. A list of the schools may be found in Appendix III.

It was considered appropriate to assess the median scholastic aptitude status of pupils in quartile one status 1969-1972. Table IV presents the findings.

TABLE IV

Longitudinal Sample
Median Scholastic Aptitude Scores
Third Grade - Quartile One
1969 - 1972
Experimental vs. Control

Group	N	1969 Q_1	1969 Median	1970 Q_1	1970 Median	1972 Q_1	1972 Median
Experimental	949	86.25	94.41	87.75	95.83	87.25	95.66
Control	878	86.25	94.58	88.25	96.25	85.63	94.63

It was evident that no appreciable differences existed between the ages of experimental and third graders in project and control Title I schools at the time of the administration of Comprehensive Test of Basic Skills Reading Tests in 1969, 1970 and 1972. It was determined more feasible to initiate the longitudinal study of the per cent of pupils in quartile one status with the 1970 results for a pre-program base. It is anticipated that the impact of Project Reach services would become more highly visible for pupils at this level and would be demonstrated by a reduction in the per cent of pupils who remain in quartile I as the project progresses.

Examination of the findings are graphically presented in Chart V. It may be observed that in 1970, approximately 29.3 per cent of pupils in 68 Title I schools scored below average in reading comprehension. At that point in time slightly more than 29.9 per cent of pupils in the 12 schools currently identified for this project were within the below average range in reading test performance. Control schools reflected 24.4 per cent rate of pupils below average in reading performance. In 1972, the percentage of pupils in the below average range in Title I schools was 12.7 per cent. Within the 12 project schools, 11.3 per cent of pupils' scores fell within the below average range while 13.9 per cent of pupils in control schools remained in this category. A more

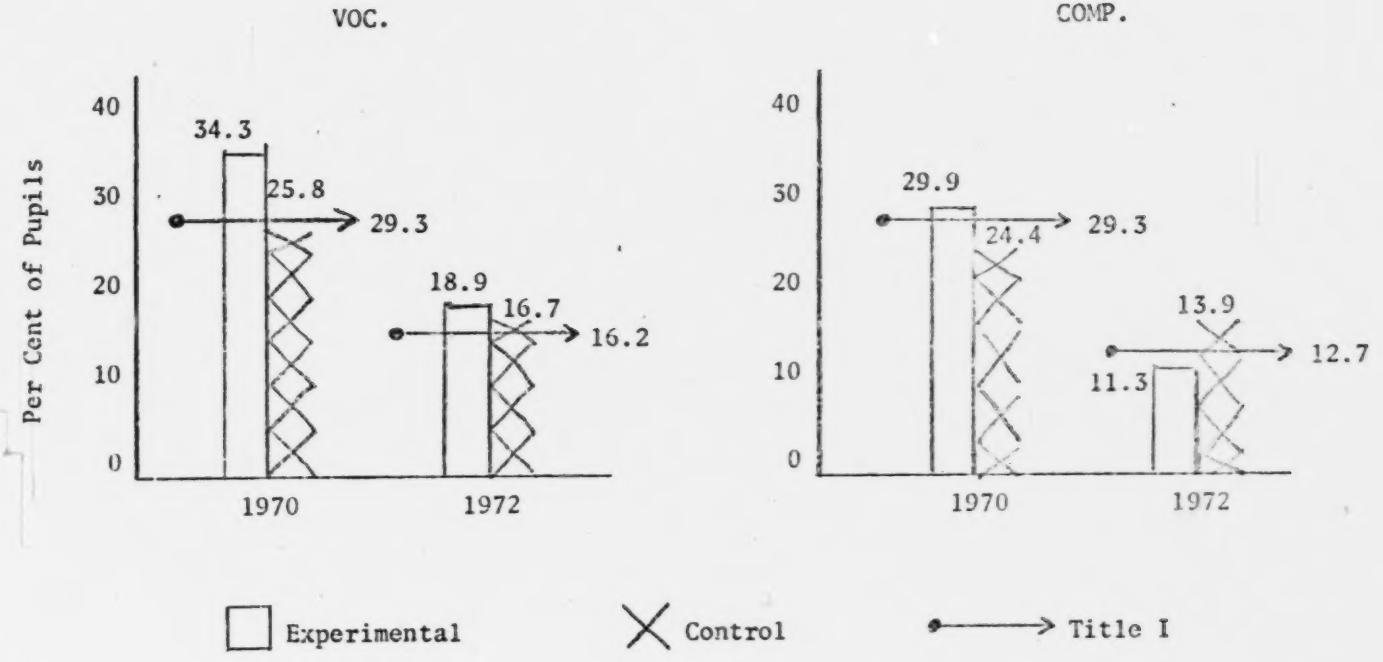
CHART V

Mean Per Cent of Pupils at Below Average Performances

Experimental, Control, Title I

Comprehensive Test of Basic Skills Reading Test Results

Grade 3 Level I Form Q-1970, Form R-1972



realistic understanding occurs with knowledge that in the 68 Title I schools a total of 4,915 pupils were involved in the 1970 administration of the third grade Comprehensive Test of Basic Skills Reading Test. Of this number approximately 1,440 pupils in these schools reflected below average reading scores. In 1972, the number of third graders tested rose to 5,424 pupils. Of this number approximately 689 scored in the below average reading range in comprehension.

Enrollment of third graders in schools identified as experimental to receive services of Project Reach stood at 980 at the time of the administration of the 1970 Comprehensive Test of Basic Skills in reading. Of this number 293 were below average by test performance. In 1972, a total of 956 experimental third graders participated in the city-wide testing program utilizing the Comprehensive Test of Basic Skills Reading Test. Results revealed 107 pupils in these schools demonstrated below average reading capabilities as measured by their comprehension scores. Approximately 136 of 981 pupils in control schools achieved below average status in 1972 compared with 214 of 878 pupils in 1970. While there occurred an overall drop in the numbers of pupils in experimental and control schools who failed to demonstrate functional reading capabilities for grade level, there remain pupils within the schools whose reading performances identify them to remain in need of different reading instruction strategies.

It cannot be conclusively interpreted that participation in Project Reach was the major contributing variable for change in this longitudinal study at this point in time. Continued follow-up of third grade results over the duration of this project will be needed to determine whether there is a continued decline in the number of pupils who fall within quartile one by virtue of assistance given their reading needs.

The evaluation report also attempted to determine the perspective of school staff about project impact. The opinions of principals of participating schools, suggestions and recommendations are provided in complete summary form. Data gathered and reported in response to item six reveals that a key objective of the project was realized. That objective concerned itself with providing an observable impact upon classroom teaching strategies for the benefit of pupils to the extent of effect on 50 per cent of teachers. The range of impact observed was from 50 to 100% of teachers participating. Teacher identification of specific techniques considered most effective in reading skill development will be needed after sufficient definitive exploration before attempting to draw conclusions in answer to the question:

Which strategies are more helpful in adapting teaching styles to accommodate different learning problems in reading based upon subjective judgment?

PROJECT REACH

Principals' Opinionnaire

2. To what degree was Project Reach operative in your building?

Totally - 90%
90% -
75% -
50% - 10%
None -

4. What did you consider to be strengths of this program for children?

- Individual help from impact aide.
- Additional materials to be used by children.
- Literature program good.
- Creativity and dedication of supportive staff.
- Daily remediation of the children that were behind.
- Ability to work with students at grade level of their ability.
- Extra interest for each child as individual.
- Use of variant teaching techniques and differentiated learning materials which are specially structured for selected children.
- Giving help in small group and individual instruction.
- Stimulating a desire to read and making at a pleasure.
- Material and staff that made the reading approach an individualized one.
- Opportunity for late developers in reading to receive a "double exposure" of reading experiences.
- The "Open Classroom" approach used by the Reach supportive staff, helped children to identify and work toward alleviating personal weaknesses.
- Exposure to a variety of techniques and materials. Flexible scheduling to meet individual needs.

- Progress charts showing children's progress in different skills were placed in a strategic place in Reading Room, enabling child to evaluate his own success in reading.
- Daily session with a specialist.
- Small group situations
- Allowed teacher to successfully meet needs of all students.
- Provided opportunity for individualization of instruction.
- Remediation of specific depressed skills. Adequate personnel.
- Effective supply of funded and teacher-made materials.
- More individualization. Smaller groups. Opportunity to use different approaches, different books and materials.
- Children with common needs worked together. Children remained in remedial groups only as long as necessary.

5. What did you consider to be the strengths of this program for teachers?

- Help for impact aide in Grade 1.
- Construction workshop for Grades 2 and 3.
- Teachers reluctant to accept new ideas, as project proceded, most of them were cooperative.
- Special interest and concern for their children.
- Absentees were reinforced in the work they missed.
- Teacher assisted with specific problems. Children with special reading problems removed from groups for special help. In-service for teachers. Assistance with testing.
- Help for severely retarded reader whose needs connot be met in the regular size classroom.
- The availability of many and varied materials sparking the enthusiasum of teachers.
- Opportunities to set school behavorial objectives for reading via local in-service meeting.
- Intra school workshops were especially helpful to new teachers.
- In-service meetings.
- Service available to teachers "on the spot" by the reading consultant.

- In-service meetings for teachers proved helpful by:
  Introducing new and differentiated materials for use in classroom.
  Exchanging ideas.
  Visits to the Consultants room for demonstrations sensitized teachers to different learning techniques and expose them to new teaching skills.

- Willingness and cooperation of the Project Reach staff to assist and the feeling of freedom on the part of the teacher to request assistance of them.

- Additional reinforcement of children's weaknesses. Communication of Reading Consultant with entire school, teacher, principal and parents.

Suggestions and Recommendations

District meetings for primary teachers and principals who are involved in the program.

Instructional objectives stressed earlier in the year.

A skeleton set of guidelines, dates for testing, etc. might be helpful for entire year. This might help with total view of the program.
Date of screening and selecting children.
Date to begin remedial work with students.
Number of students to be given remedial.
Guidelines for point meetings.
Suggested Open House.
Date for evaluation or testing.
Last date for working with children.

Continue to send information copies to principals on supplies that are ordered or books to be ordered, etc.

Continuation of program and supportive staff. Follow-up in 4th grade as to remediation...results...teacher service...evaluation.

Orientation sessions in each bldg. with teachers, consultant, principal and supervisor. Presentation of strategy to be employed.

Supplementary reading books. Work books. As many reading machines as possible. Games for groups to be worked independently.(phonics)

Pre and post-test through primary grades, instead of just grade 3, would motivate the teachers to be more accountable, thus higher achievement on the pupils part.

Supply materials for Project Reach from Project Reach storehouse (on loan if necessary). Provision for in-service and workshops at home school level to serve all teachers K-6, after regular school hours.

6. What per cent of the participating teachers reflected improved flexibility in the use of different teaching techniques to meet individual pupil reading needs?

50%
60%
70%
90%
50%
100%
50%
97%
90%
No response from 2 principals

Average participation 65.70%

A most crucial evaluation concern was teacher ratings of the progress of individual pupils whom they referred for project services. The rating sheet was designed to draw upon the subjective thinking of teachers in an attempt to gain in-depth insight into their assessment of project impact upon the post reading performances of project participants whom they had referred.

It must be borne in mind that the referral of any individual pupil to receive the services of Project Reach may carry with it from one to any number of reading skill deficiencies. The range may span from one to seven skill clusters encompassing 29 specific skill needs. It was determined that for the 38 first graders in the sample a total of 250 reading skill deficiencies were reported as remediated. Based upon the classroom performances of these pupils, teachers rated their progress in reading as:

Reading Skills N	Greatly Improved	Much Improved	Adequate	Limited Improvement	No Improvement
250*	15%	31%	33%	11%	10%

*Per cent based upon agrregate count

It may be interpreted that at second grade level, the reading skill deficiencies of pupils had become greatly multiplied. Approximately 50 per cent of the reading skill needs of pupils required the expertise of the reading consultant, 48 per cent, the services of the supportive teacher under the direction of the consultant and four per cent, the combined efforts of consultant and supportive teacher. At

least 77% of this sample received a satisfactory rating (S) in reading. In the prior year, 16 per cent had achieved more than one step beyond step one in reading. Currently, 13% achieved more than one step beyond, a range of from one to three steps.

The sample group of 52 third graders reflected a total of 593 reading skill needs. At post treatment, their classroom teachers assessed their mastery of these deficiencies in the following manner:

Skill Area N	Greatly Improved	Much Improved	Adequate	Limited Improvement	No Improvement
593%	27%	54%	52%	38%	15%

*Per cent based on aggregate count

At post treatment 73 per cent of pupils in the third grade evaluation sample received a rating of satisfactory (S). Of this number of pupils served, 73 per cent required the skill of the consultant exclusively, 38 per cent required the additional support of the supportive teacher and eight per cent of the third grade sample had completed more than one step beyond the reading step for this grade in the prior year. At the end of the project year, the number completing steps beyond step one had increased to 23 per cent.

APPENDIX

V. CONCLUSIONS AND RECOMMENDATIONS

It may be concluded that the Cleveland Public Schools have implemented in Project Reach a series of reading development instructional strategies for the benefit of pupils who need immediate and/or long-term assistance with their learning styles and subsequent reading deficiencies. It is recommended that the project be continued.

Based upon information gathered for study in this pilot evaluation, the project might wish to consider:

- immediate standardization of its diagnostic procedures through the use of criterion-referenced testing and appropriate mastery-level assessment instrument
- assessment and refinement of all teaching techniques and materials which have proven promising for dissemination to in-school teaching staff
- assignment of prior effort to that portion of each schools quartile one pupils in an attempt to foster continued positive reading development growth for these pupils
- continuance of its focus on teacher in-service and parent involvement.

APPENDIX I

PROJECT REACH
School Enrollment
Primary Grades
June, 1972

School	Grades			Total
	1	2	3	
1. Anton Grdina	124	116	91	331
2. Charles Chesnutt	71	50	96	217
3. Charles Lake	74	201	31	306
4. Charles Orr	54	41	41	136
5. Crispus Attucks	58	71	53	182
6. Doan	64	61	59	184
7. Forest Hill Parkway	100	99	95	294
8. George Washington Carver	94	83	101	278
9. Hicks	82	47	49	178
10. Mount Pleasant	134	142	151	427
11. Sterling	63	63	46	172
12. Woodland-Observation	87	62	77	226
TOTALS	1005	1036	890	2931

APPENDIX II

PROJECT REACH

Pupils Referred for Intensive Treatment

Primary Grades
1971-1972

School	Grades			Total
	1	2	3	
1. Anton Grdina		23	29	52
2. Charles Chesnutt	14	20	13	47
3. Charles Lake	23	42	43	108
4. Charles Orr	34	37	20	91
5. Crispus Attucks	23	18	23	64
6. Doan	31	33	19	83
7. Forest Hill Parkway	14	23	34	71
8. George Washington Carver	38	22	38	98
9. Hicks	30	19	13	62
10. Mount Pleasant	33	49	45	127
11. Sterling	30	41	6	77
12. Woodland-Observation	43	29	55	127
TOTALS	313	356	338	1007

APPENDIX III

PROJECT REACH

Comprehensive Test of Basic Skills
1971-1972
Grade 3

Experimental - Control

			No. Tested	Poverty Rate
1.	E	Anton Grdina	91	28
	C	Boulevard	117	26
2.	E.	Charles Chesnutt	74	78
	C	Bolton	80	60
3.	E	Crispus Attucks	53	82
	C	Hough	87	70
4.	E	Forest Hill Parkway	95	31
	C	Woodland Hills	100	32
5.	E	Hicks	48	38
	C	Scranton-Mill	67	39
6.	E	Mount Pleasant	146	31
	C	Lafayette	114	25
7.	E	Sterling	41	50
	C	John Burroughs	26	62
8.	E	George W. Carver	93	59
	C	John W. Raper	113	51
9.	E	Woodland-Observation	77	46
	C	Stanard	48	39
10.	E	Charles Orr	38	47
	C	Columbia	90	54
11.	E	Charles Lake	119	47
	C	John D. Rockefeller	63	52
12.	E	Doan	59	62
	C	Longwood	76	67
		TOTAL E	956	
		C	981	

*Enrollment at time of administration of Comprehensive Test of Basic Skills, Reading, March 20, 1972.

APPENDIX IV

PROJECT REACH

School_____ 1972

Teacher_____

Pupil Rating Sheet

Reading Instruction Program - 1972

_____has been receiving the services of the Reading Instruction Program. We are interested in securing from you, his classroom teacher, ratings and pertinent information about his reading performance. Please complete, check and return the completed form to the Division of Research and Development, attention Juanita Logan, room 610, as soon as possible.

1. Indicate latest scholastic aptitude test result.

*MR_____ PLR_____ IQ_____

Test_____

2. Child's birthdate_____ Age_____
month day year 6/72

3. Present grade level_____ In September_____

4. Child's annual attendance (add both semesters)_____

5. Reading mark assigned_____

*Metropolitan Reading Readiness Test-Letter Rating

6. Use child's reading card:

How many steps did the child progress beyond Step I in reading of his grade in 1970-71? ☐

How many steps did the child progress beyond Step I in reading of his grade in 1971-72? ☐

(Con't)

APPENDIX IV (con't)

PROJECT REACH

School_____

Teacher_____

Pupil Rating Sheet

7. In your opinion can this child handle the usual reading material for his grade level? (Disregard numbers, check the box only).

☐ Always 5 ☐ Most of the time 4 ☐ Sometimes 3

☐ Rarely 2 ☐ Not at all 1

8. How many times was this child referred to consultant and/or supportive teacher for service? ☐

In your opinion, what was the child's reading difficulty?

First time:_____

_____

_____

Second time:_____

_____

_____

Third time:_____

_____

_____

(Con't)

9. Did the service rendered meet the child's needs commensurate with his ability?

☐ First time ☐ Second time ☐ Third time

10. To what degree was improvement noted?

☐ Very marked ☐ Marked ☐ Adequate ☐ Limited ☐ Poor

11. What was length of service?

First time: ☐ 1-3 weeks ☐ 4-6 weeks

☐ 7-12 weeks ☐ 13 weeks ☐ More

12. Please indicate degree of improvement of child's reading skill needs as you indicated them on the referral sheet.

Please refer to copy of initial referral checklist attached.

Thank you
Pauline S. Davis
Educational Program Manager
Reading Instruction Program